

THE AMSTERDAM HEALTHY WEIGHT APPROACH

INVESTING IN HEALTHY URBAN CHILDHOODS:
A CASE STUDY ON HEALTHY DIETS FOR CHILDREN

✘ Gemeente
✘ Amsterdam
✘

E • •
A T •

unicef 

ACKNOWLEDGMENTS

This case study on the Amsterdam Healthy Weight Approach was initiated by UNICEF and EAT as part of their partnership: Children Eating Well (CHEW).

This report was coordinated and written by Jens Aerts. It benefited from the inputs of a range of experts. A special recognition for the invaluable reflections and diligent comments from: Bernadette Gutmann (UNICEF), Jo Jewell (UNICEF), Leonie Barelds (UNICEF Netherlands), Andrea Oyuela (EAT), Elin Bergstrom (EAT), Samantha Nesrallah (EAT), Pasha Elstak (City of Amsterdam), Karen den Hertog (City of Amsterdam), Vincent Busch (Sarphati Amsterdam) and Arnoud Verhoeff (Sarphati Amsterdam).

We are grateful for the support of EAT, the city of Amsterdam, UNICEF Programme Division, UNICEF Private Fundraising and Partnerships Division and UNICEF the Netherlands. We specifically thank Víctor M. Aguayo for his support and guidance on the development of this publication.

Funding for this work was provided by UNICEF, supported through a partnership with Novo Nordisk on the prevention of childhood overweight and obesity.

Design: Nona Reuter, Editing: Julia D'Aloisio

November 2020

© United Nations Children's Fund (UNICEF)

Photo credits: Cover: © Maarten Brante; page 4: © Roos Trommelen; page 12: © George Maas; page 15: © Suzanne Blanchard; page 17: © Sanne Couprie

Suggested citation: UNICEF, City of Amsterdam, EAT, *The Amsterdam Healthy Weight Approach: Investing in healthy urban childhoods: A case study on healthy diets for children, 2020*

CONTENTS

EXECUTIVE SUMMARY: A WHOLE-SYSTEM APPROACH FOR A HEALTHY URBAN CHILDHOOD	4
1. INTRODUCTION	7
2. COMPONENTS OF THE AMSTERDAM HEALTHY WEIGHT APPROACH	8
2.1 Programme goals and focus groups	8
2.2 A tailored approach to tackle a complex problem	8
2.3 Adaptive clustered programme activities	10
2.4 Programme phases	14
3. KEY SUCCESS FACTORS OF URBAN INNOVATION TOWARDS HEALTHY FOOD ENVIRONMENTS FOR CHILDREN	16
3.1 A whole-system approach to create a healthy environment	16
3.2 An evidence-based approach, to learn and to adapt	16
3.3 A platform for collaboration and participation	18
3.4 Strengthening city governments' accountability	19
4. PROGRESS TO DATE AND RECOMMENDATIONS FOR MOVING FORWARD	21
4.1 Apply a child rights lens to equitably reach all children and achieve sustainability	22
4.2 Invest in innovative city-level programming	30
4.3 Enhance partnership models for allocation of resources	34
4.4 Support professionals and priority groups to co-design solutions	35
ANNEX 1: BASELINE DATA	37
ANNEX 2: ILLUSTRATION OF ACTIVITIES AND MONITORING RESULTS	38
Target 2018 – The 5000-metre race	38
Target 2023 – The half marathon mission	39
BIBLIOGRAPHY	41
Reports and websites from the city of Amsterdam	41
Existing case studies on the Amsterdam Healthy Weight Approach	41
Other reports	41
ENDNOTES	42



EXECUTIVE SUMMARY

A WHOLE-SYSTEM APPROACH FOR A HEALTHY URBAN CHILDHOOD

The Amsterdam Healthy Weight Approach (AHWA) is a city-wide, local government-led initiative aimed at achieving a healthy weight for children in a healthy environment. It was set up in 2012 to address the complex problem of childhood overweight and obesity, that at the time was much more prevalent among children living in the city of Amsterdam than the national average. It demonstrates the capacity of, and the need for, local authorities to take initiative in tackling pervasive problems such as childhood obesity.

With a long-term vision aimed at lasting change, the AHWA develops activities to influence policy, to educate and inform policy makers, and to build

capacity among professionals. Combined, these activities aim to support target groups within at-risk communities to adopt a healthy lifestyle. The AHWA does this via a 'Health In All Policies' approach. Its strength lies in adopting a whole-system strategy that drives collaboration in an integrated, multi-level, multisectoral way, with a variety of stakeholders from within and outside the field of public health. The AHWA starts with a vision of health for all. It recognizes that individuals often learn and adopt unhealthy preferences and behaviours early in life, which contribute to overweight and obesity, both in childhood and later in adulthood, and are extremely difficult to change over the course of a lifetime. Without early intervention – such as actions



to support and maintain healthy dietary practices, sleep behaviours and physical activity – early life experiences can have lifelong health impacts. Via its equity lens, the AHWA aims to provide chances of a healthy childhood to all, but recognizes that some children require specific attention. Acknowledging the correlation between poverty and obesity, it also has a focus on people living in environments that place them most at risk of developing overweight and obesity, such as children from families with low socio-economic status, limited education and a migrant or minority ethnic background. As these target groups mostly live in specific areas of the city where a combination of poor socio-economic and environmental factors are at play, the programme began with a focus on at-risk social groups living in 11 districts within the territory of the city boundaries.

The city government of Amsterdam recognizes that childhood overweight and obesity is a major nutrition and health crisis that requires everybody to play a role in solving, in the context of the family, but also at the level of the school, the neighbourhood and

the built environment. It also recognizes that the leading role of the public sector is complemented by an equally important role of non-governmental and private sector actors. The programme invests in a combination of prevention and management activities that jointly are designed to lead to healthier behaviours in a healthier environment. This strong focus on healthier social and physical environments has led to the inclusion of better urban design as a way of supporting healthier behaviours in a sustainable way. In light of the AHWA's central model of 'Health In All Policies', this is often not an effort from the public health domain alone, but involves collaborations with other sectors, such as urban planning and economic affairs.

The AHWA addresses a range of different target groups, from small children and teenagers to new parents and their infants. To ensure a wide reach, the programme supports caregivers, teachers, health professionals, youth workers, community leaders and so-called "neighbourhood managers". Finally, it also works with entrepreneurs, retailers and the food

industry to stimulate healthier purchasing behaviours and improve business practices.

The AHWA has dubbed itself as a 20-year marathon. It takes a generation to be able to provide a healthy environment for children to grow up in, and where the healthy choice is the easy choice. Earlier published data on overweight and obesity in children living in Amsterdam showed promising results. While the national average remained the same, childhood overweight and obesity prevalence in Amsterdam decreased by 12 per cent for all age groups between 2012 and 2015 (from 21 to 18.5 per cent for all children). This provided the programme with the necessary support to further grow and develop.

Although positive and promising, such effects – positive or negative – cannot be conclusively attributed to the AHWA, as is the case with any complex systems approach. However, the AHWA did strengthen Amsterdam’s belief that applying an adaptive, whole-system approach can stimulate children and their families to grow up with healthy behaviours in a healthy environment. The AHWA contributes in providing the needed steering mechanisms, based on evidence, research and practice, to determine how to get the desired results.

The city of Amsterdam will continue its marathon, with continued emphasis on learning; the AHWA is researching the viability of a learning network with other cities with similar ambitions in relation to tackling the complex problem of childhood overweight and obesity. It aims to jointly advocate for a healthy environment in its broadest sense,

to share and exchange knowledge, research and evaluate what works and identify lessons learned.

This case study identifies four crucial elements that make up the AHWA and might serve as an inspiration for other cities, governments, private sector partners and other relevant stakeholders in tackling the problem of childhood overweight and obesity:

- 1. Apply a child rights lens to equitably reach all children**
- 2. Invest in innovative city-level programming**
- 3. Enhance partnership models for allocation of resources**
- 4. Support professionals and priority groups to co-design solutions**

The AHWA demonstrates that a broad systems strategy delivered at the city level is a promising approach to promote and secure nutrition and health for all children in urban settings. The approach demonstrates how city level action can contribute to respecting, fulfilling and promoting children’s rights as enshrined in the Convention on the Right of Children, while contributing to the achievement of the broader 2030 Agenda for Sustainable Development, in particular, Sustainable Development Goals 2 (zero hunger), 3 (good health and well-being) and 11 (sustainable cities and communities).



1.

INTRODUCTION

The Amsterdam Healthy Weight Approach (AHWA) is a unique programme aimed at a city-wide reduction in childhood overweight and obesity. Applying lessons learned from systems science, the AHWA involves a range of policy actors and stakeholders from inside and outside of public health, and has generated much global interest due to its early promising results.^{1,2}

Section 2 of this case study outlines the why, what and who of AHWA. It summarizes the approach and shares the knowledge and good practice examples from Amsterdam to illustrate how city governments can address the rising prevalence of childhood overweight and obesity. It aims to stimulate the interest of other cities and city networks, including UNICEF Child-Friendly Cities Initiatives, and encourage them to assess their own situation, and detect and respond to the local drivers of childhood overweight and obesity.

Section 3 describes key success factors and elaborates on how the approach achieved results within the set up of a city authority, as a whole system approach in a continuous process of learning, monitoring and adaptation. It provides guidance to cities on governance mechanisms, the participation of children and youth, the external or structural factors (such as food and build environments) that need to be addressed, the different entry points for action such as the education system or neighbourhood level, and the individual support that is needed to improve individual and caregiver practices.

The case study concludes in **Section 4** with some insights for Amsterdam and other cities regarding opportunities to scale up action using a child rights-based approach. It sums up the progress to date and aims to clarify key success elements that are transferrable to other cities and local contexts, including in low- and middle-income countries.

2.

COMPONENTS OF THE AMSTERDAM HEALTHY WEIGHT APPROACH

The AHWA was initiated by the local government authorities of the city of Amsterdam in 2012, prompted by data showing a higher rate of overweight and obesity among children under 19 living in the city. In Amsterdam the prevalence of overweight and obesity among children aged 10 years was 21 per cent compared to the national average of 13 per cent.³ These data led the deputy mayor at that time to provide the necessary political leadership to initiate the AHWA, which was launched as a coordination-oriented and learning-based programme, adopted by the mayor and executive board in 2013.

This section describes how the city government took on the challenge of reducing childhood overweight and obesity using context-driven actions to respond to specific situations at a specific period of time.

2.1 Programme goals and focus groups

Amsterdam wants to achieve structural change that positively impacts the many underlying determinants of inequality and poor health in the city. This is an enormous ambition that takes a lot of time to accomplish. Therefore, Amsterdam appropriately refers to the AHWA as ‘a marathon, not a sprint’, with intermediate, shorter-term goals along the way to achieve ambitious long-term goals and to kickstart systemic change. The main goal is to have the same

overweight and obesity rates in Amsterdam as the rest of the Netherlands by 2033, and to make Amsterdam one of the top five healthiest European cities. This main goal is broken down into several sub-goals:

- **Target 2018 – the 5000-metre race: a healthy weight for 0–5-year-olds in Amsterdam.**
- **Target 2023 – the half marathon: a healthy weight for 0–10-year-olds in Amsterdam**
- **Target 2033 – the marathon: a healthy weight for all young people in Amsterdam**

The 20-year-long period of AHWA calls for a life cycle approach, highlighting the importance of prevention from an early age, as well as maintaining healthy diets and physical activity throughout childhood. This means the programme can ‘follow’ all children as they grow up and manage life transitions. At the same time, it can focus on priority groups that have the highest risk of overweight and obesity and therefore require a different approach to promote a healthy weight.

2.2 A tailored approach to tackle a complex problem

The city of Amsterdam recognized that, due to the complex nature of the problem, childhood



BOX 1

THE RAINBOW MODEL

Inspired by the socio-ecological Rainbow model of Dahlgren and Whitehead (1991), the AHWA adopted the Rainbow model as its theory of action. It seeks a maximum influence beyond the strict limits of the mandate of a city authority. It reflects a whole-system approach that recognizes the importance of a life cycle approach targeting children over various stages of their childhood, but also the need for broad participation, the management of internal and external stakeholder engagement and tailored communication and outreach to target groups. The Rainbow model has been adapted recently, putting more attention on the first 1,000 days of life (from conception to age 2), the engagement with youth, children in special education and the need for a healthy environment.

FIGURE 1: Rainbow model (version 2018), based on the socio-ecological model of Dahlgren and Whitehead

overweight and obesity required a long-term, multi-sector strategy that was adaptive. In its quest to tackle the ‘wicked’ problem of childhood obesity, the AHWA takes action to change the entire relevant ecosystem surrounding children and their families. This means orchestrating multiple coordinated actions focused on the social and physical environment, as well as on the personal determinants and motivation.

AHWA embodies the will of Amsterdam city to invest in public sector management innovation, notably the use of an integrated approach, inspired by the Rainbow model (see Box 1). This enabled the programme to be implemented using ‘clustered’ activities and a model of ongoing implementation and continuous learning, evaluation and adjustment.

2.3 Adaptive clustered programme activities

The AHWA organized itself into clustered activities based on priority target groups and specific behaviour change goals. The clusters brought together many existing city-wide programmes as part of a new collective effort and encouraged them to work together differently.

The cluster approach reflects what the city of Amsterdam believed to be the most appropriate working structure during the initiation phase. This division into clusters illustrates the AHWA’s adaptive nature, with specific focus, content and priorities of the programme, working across sectors, and the ability to change in response to progress made and the context at that moment in time. For example, the new cluster ‘Adolescents’ brings together a relatively new group of actors and activities, while the clusters ‘Children with overweight’ and ‘School Approach 4-12’ have swiftly become structurally implemented.

Below, we illustrate the clusters that were established in 2013, with an example to illustrate each cluster’s content:

CLUSTERED ACTIVITIES



I. The first 1000-days activities

A central AHWA goal is to facilitate a healthy start in life for all newborns by focusing its efforts on expecting and new parents. It carefully connects care and counselling efforts of mostly medical professionals with the informal community networks that parents rely on, such as those set up by religious leaders and social groups.

AHWA used alignment and coordination with the national Equitable Start Programme, to strengthen efforts to work on the underlying determinants of health and inequity in the city.⁴

II. School-based activities

Reaching children means working with and in schools. Via Amsterdam’s Jump-in Programme, the AHWA assists primary schools in providing a healthy school environment to all children. It accelerates the adoption of evidence-based methods and policies to effectively stimulate physical activity, active recess play and nutrition education, all of which were developed by the state-of-the-art behavioural science methodology known as ‘intervention mapping’ and evaluated to be effective via rigorous scientific evaluation studies.

The Jump-in Programme’s implementation has gained priority, especially in schools where the average Body Mass Index (BMI)-for age is higher than the average in the Netherlands. In this way, Jump-in is illustrative of the way Amsterdam aims to achieve equity and provide every child with the same chance to live a happy and healthy life in a healthy environment. It also demonstrates how scientific rigor is integrated into the behavioural change techniques that make up these interventions, policies and actions.⁵

Its ‘school cluster’ illustrates the AHWA’s changing, adaptive nature by recently starting to collaborate with the existing School Garden Programme that



involves theoretical lessons and practices outdoors for children in the 13 school gardens that were especially designed for this purpose. Each year in these gardens, 7,000 children aged 9–11 annually acquire knowledge about nature, the environment, food and food produce. Research demonstrates the programme's positive effects on several nutrition behaviour determinants in children.⁶

AHWA also supports the upcoming Amsterdam Healthy City programme to implement after-school activities in the focus neighbourhoods, managed by sport or welfare organizations.

III. Neighbourhood-based activities built around community networks

The highest prevalence of child overweight and obesity, that well exceeds both the national and Amsterdam average, is concentrated in a small number of geographical areas within the city. These specific areas correspond well to the five most deprived districts. Therefore, the AHWA has consciously adopted an area-based approach, focusing on the design of integral, context-specific multidisciplinary preventive measures. Each of these districts has its own 'neighbourhood manager', who works for the city of Amsterdam, and coordinates and stimulates the implementation of health-promoting interventions and policies in conjunction with local partners and colleagues. The choices neighbourhood managers make in how, what and why to implement certain activities, interventions and policies are based on data and shared knowledge of the local context, the characteristics of their target group and the physical and social environment. Implemented efforts vary from bringing together residents, community and self-help organizations and professionals, to providing education and training for key figures within the communities, such as spiritual leaders, ensuring they become health promotion leaders in their communities.

IV. Healthy food and built environments

As one of its main priorities, AHWA focuses on creating a healthier physical urban environment that facilitates healthier behaviours and accommodates the healthy choice as the easiest choice.

For example, the AHWA has been building upon the city's partnership in the Stop Unhealthy Food

Marketing to Kids Alliance, which is a broad national collaboration of scientists, social, health and consumer organizations that calls for the protection of children against the marketing of unhealthy food.⁷ AHWA has successfully advocated within the city to translate the recommendations of the Alliance into local food advertising regulations. Acknowledging that self-regulation in the food industry does not suffice, a city-wide interdepartmental effort and collaboration has been set up to develop bolder regulations on city buying practices, licenses, subsidies and sponsorship that targets children. To support this, AHWA is striving to incorporate the supply of healthy food in children's direct environment for activities that the city subsidizes, and where possible, in public spaces.

AHWA facilitates and advises local food entrepreneurs on issues ranging from healthy business operations to portion sizes and menu labelling. AHWA has developed pilots with local shop owners and supermarket retailers to offer healthier food options, menus and portion sizes.⁸ It also played an active role in food and consumer debates regarding labelling, product formulation and portion size by the food industry.

Through its urban planning policies, the city aims to design healthier built environments that accommodate healthy behaviours for all citizens. This includes, for example, using the products from the Active City programme, investing in urban design to encourage biking, walking and local food production, as well as providing access to space for sports and playgrounds.⁹ These activities focusing on the built environment are complemented with educational programmes around school gardening, cycling classes and traffic exams for primary school children. This place-based dimension promotes in-school activities, walking and biking to school, and monitoring activity levels.¹⁰

V. Offering adequate individual support to children and their families

Knowing that the early detection of childhood overweight and obesity is important, AHWA also supports the development of individually tailored support. Starting in 2013, AHWA began devising a closed chain of care for children with overweight and obesity (and their families), and based on this experience, it later enrolled in a national pilot initiated by the Ministry of Health, Welfare and Sport in 2016.

With the health insurance partnerships, all children who are affected by overweight or obesity and their families received connected support and care programmes that followed specifically defined care pathways. Families with a child affected by obesity were assigned a central care manager who worked closely together with a network of professionals such as dietitians, physiotherapists and paediatricians, but also parenting support, debt counsellors and youth psychologists. There is a national dialogue with relevant stakeholders and partners on how to structurally implement and finance these standards of care.

Another initiative was the alliance of the local Healthy Weight Pacts, in which local care and well-being professionals collaborate to provide a closed circle of care and a more suited offer of preventive activities for children with overweight and (impending) obesity.¹¹

VI. A learning approach to capture new evidence and support skilled professionals

The AHWA has integrated a learning approach to be an evidence-informed programme that operates in the space where (behavioural) science, policy and practice meet. Specific activities have been designed to facilitate systematic learning and evidence-based programme adaptation to increase AHWA's real-world impact.

The activities cluster 'excellent professionals' supports the skills development of relevant professionals, as they have a major impact on the healthy behaviours and environments of children and families. Therefore, it designs and provides professional trainings and education for a variety of professionals, such as youth nurses, health care professionals, health promotion professionals, youth workers, school professionals, religious leaders



and their civil servant colleagues. Simultaneously, this cluster influences the content of the educational curricula, in collaboration with numerous universities and colleges. At the national level, AHWA facilitates similar upstream work, via the professional associations that ensure processes of accreditation and continued learning.

AHWA has also integrated a strong research component to shape its learning approach, through a collaboration with Sarphati Amsterdam, a unique scientific research institute founded by the Municipality of Amsterdam and four Amsterdam knowledge institutes. This research platform allows AHWA to connect practice, research and policy to improve prevention and care solutions for Amsterdam youth. See section 3 for more detail on the Sarphati Institute and AHWA's learning approach.

VII. Communication and marketing

Visually attractive content and the use of simple language in both printed and digital online versions enabled clarity in messaging and provided the AHWA with a recognizable corporate identity (see Figure 1, for example). Most recent research on behavioural insights is used to develop appropriate communication and messaging strategies, implemented in cooperation VU University Amsterdam. Communication is tailored to target groups, using social marketing techniques to send positive messages and deploying behavioural insights on how to best target groups. All communication is directed at how to obtain or maintain a healthy lifestyle. The focus is never on weight, but rather, on being and staying healthy.



FIGURE 1: 'How we stay healthy' folder, with three rules of thumb for a healthy lifestyle

2.4 Programme phases

After the two first Multiannual Programs 2013-2014 and 2015-2018, the current 2018-2021 Multiannual Program is seen as a third phase that constitutes the framework for the ongoing implementation of AHWA:

Phase 1, 2013–2014 – During this initiation phase, the focus was on developing a multisectoral approach without specific budget allocations. It relied on creating inter-departmental partnerships and sharing collective responsibility in allocating enough start-up resources and creating the first AHWA action plan via joined efforts. Centralized within the city Department of Social Affairs it was led by a programme manager who involved all relevant city departments and other key stakeholders, such as academic institutions, public organizations, the private sector and citizen groups. The political leadership of a deputy mayor was key to prioritize the issue of childhood overweight and obesity in the city's public health agenda, ensuring cross-divisional coordination, with ownership by and recognition of all key sector departments. The message was that overweight and obesity undermine the city's vision of public health for all and equal chances for all of Amsterdam's children to grow up healthily in a healthy environment. Therefore, the mayor demanded that all relevant sectors/departments take responsibility and accept their role in addressing childhood overweight and obesity. Initially placing the AHWA within the Department of Social Affairs was fundamental to developing a collaborative way of working with other city programmes that tackled related underlying determinants to overweight and obesity, such as the Active City programme.

Phase 2, 2015–2018 – The implementation phase took off once the whole-systems approach was translated entirely to an interdepartmental cooperative model. Dovetailing with a new municipal government cycle, the AHWA multi-annual programme 2015–2018 received annual funding of € 2,5 million (or only 0,04 per cent) from the city budget, supplemented with a time-bound €2,3 million project funding from the national government.¹² AHWA also searched for alignment with other health-related national programmes to increase their impact. After cementing the necessary interdepartmental collaborations within

the municipality, responsibilities for coordination of the programme were transferred again to the Public Health Department, using its expertise in developing interventions and health data collecting and monitoring.

Phase 3, 2018–2021 – In the current phase of learning and adapting, the AHWA focuses on sustaining systemic change. Instead of adding another layer to the local governance system, it aims to implement and mainstream policies and interventions within existing city programmes and processes. As a temporary change programme, the AHWA's learning approach plays a more prominent role in the current phase. This explains that, in the context of the recent 'Health In All Policies' model of the city of Amsterdam (Box 2), the AHWA has invested in brokering knowledge on state-of-the-art techniques in behavioural change science and the latest scientific evidence-, practice- and expert-based insights on overweight and obesity prevention and management.¹³ The structural collaboration between AHWA and the city's new research institute Sarphati Amsterdam (see section 3) serves this purpose, by critically reviewing and potentially adapting current interventions.

BOX 2

HEALTH IN ALL POLICIES¹⁴

The Amsterdam Healthy Weight Approach adopts the 'Health In All Policies' model, which is a framework for public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity. As a concept, it reflects the principles of legitimacy, accountability, transparency and access to information, participation, sustainability, and collaboration across sectors and levels of government.

Why does it matter? Health and health equity are values in their own right and are also important prerequisites for achieving many other societal goals. Many of the determinants of health and health inequities in populations have social, environmental, and economic origins that extend beyond the direct influence of the health sector and health policies. Thus, public policies in all sectors and at different levels of governance can have a significant impact on population health and health equity.

The framework sets out six key components that should be addressed in order to put the approach into action:

1. Establish the need for 'Health In All Policies' and its priorities
2. Frame planned action
3. Identify supportive structures and processes
4. Facilitate assessment and engagement
5. Ensure monitoring, evaluation, and reporting
6. Build capacity

These components are not fixed in order of priority. Rather, individual countries will adopt and adjust the components in ways that are most relevant for their specific governance, economic and social contexts.



3.

KEY SUCCESS FACTORS OF URBAN INNOVATION TOWARDS HEALTHY FOOD ENVIRONMENTS FOR CHILDREN

The AHWA, including its clustered activities and adaptive characteristics, illustrates the unique potential of city-level innovation. It acknowledges complexity, adopts a whole-system approach and embraces continuous adaptation and learning, based on evidence and evolving insights. This section describes key success factors that have provided the foundation for AHWA to be successful and showcases what makes cities a unique policy environment to develop in meaningful urban innovation.

3.1 A whole-system approach to create a healthy environment

AHWA differs from previous public health efforts because it focuses on changing the environments in which children eat, play and live and acknowledges the need for a whole-system approach. To effectively combat a complex problem like childhood obesity, the response needs to address the totality of factors that lead to underlying unhealthy behaviours, and this must be done collectively as one system rather than through a siloed approach.¹⁵ This is typified by:

1. Simultaneous actions addressing interacting factors of interest that influence obesity development
2. A high degree of cross-sectoral working

3. Capacity for responsive action as opposed to a static, set programme

The AHWA is particularly attentive to the insights developed within behavioural science. In line with the Behaviour Change Wheel, the approach strives to combine relevant parts of ‘capacity’, ‘opportunity’ and ‘motivation’ in order to achieve effective, lasting (behavioural) change.¹⁶ This constitutes a significant deviation from public health efforts of the past, which were in large part focused on personal determinants, such as the knowledge, attitude and skills needed to perform a certain behaviour, while often neglecting the enormous influential power of physical and social environments.

3.2 An evidence-based approach, to learn and to adapt

Due to all the interconnected factors that join together to create an obesogenic environment, being adaptive often requires the AHWA to deal with non-linear relationships and feedback loops between factors in the system.¹⁷ This means that the AHWA must have the capacity to learn, be responsive to new data and insights at its core (e.g., new published literature or evaluation studies), and adapt actions in response to such emergent information. This differs from many previous public health efforts,



BOX 3

BUILDING KNOWLEDGE ABOUT THE CITY THROUGH SCIENCE

Sarphati Amsterdam is a unique scientific research institute in Amsterdam. Its mission is to conduct research to contribute to a healthy lifestyle and optimal living conditions for young Amsterdam residents. This forms the foundation for long-term prevention and eradication of non-communicable diseases like obesity among current and future generations.

Sarphati Amsterdam is a collaboration of the Municipality of Amsterdam, with its Public Health Service at the core, and all the Amsterdam knowledge institutes established in order to focus

on effective and sustainable prevention of diseases of affluence. Multi-disciplinary teams work on prevention and care solutions for Amsterdam youth. In the context of the Amsterdam Healthy Weight Approach, Sarphati Amsterdam aims to do this by connecting practice, research and policy, which are crucial for the AHWA to continuously evaluate and adapt, based on the last scientific insights. One of its central roles closely resembles the description of a ‘knowledge broker’ which aims to bridge the gap between academic research and policymaking, ensuring that evidence reaches the right audiences, in the right formats at the right time.

which have most often seen their intervening actions and ‘results’ in isolation, rather than as part of a continually adapting complex system. To be suitable as a tool for learning and to inform appropriate adaptation, the AHWA’s continuous monitoring and evaluation efforts must resemble the approach’s complex, multi-level nature.

Therefore, despite it being an important end goal, BMI changes at the population level cannot be the only measure for failure or success of the programme. It is vital to ensure monitoring of processes (e.g., the implementation), outputs (e.g., actions taken by professionals), short-term outcomes (e.g., changes in food environments), intermediate outcomes (e.g., nutrition behaviours) and, eventually, multi-level impact outcomes (such as child BMI prevalence rates at the city level). Identifying appropriate measures for these outcomes, as well as setting up appropriate monitoring systems to structurally measure them accurately, is therefore a focus point in the current (2020) programme phase, and in the collaboration with the researchers of Sarphati Amsterdam (see Box 3).

Currently, AHWA is in the process of improving its impact monitoring system by incorporating indicators to better ascertain its total impact. The AHWA distinguishes three ways in which these indicators will be used:

Monitoring – Tracking the results of the AHWA and providing insights into the way in which these results are achieved. Indicators at output, outcome and impact levels are particularly suitable for this purpose. For example, the AHWA contributes to the creation of multi-departmental policies (i.e., output) in order to create a healthier public space environment, with fewer fast food restaurants in the city and easily available, healthy alternatives (i.e., outcomes), in order to eventually influence the BMI and overweight/obesity development of Amsterdam’s citizens. In addition, data on children’s BMI is routinely collected by Amsterdam’s youth health care professionals in a valid way in more than 95 per cent of children up to 10 years of age. More details on the baseline data and progress on childhood overweight and obesity can be found in Annex 1.

Steering – Measuring impact also provides tools to course correct. For example, if measuring the results shows that goals are not being achieved, data on their indicators at effort level are needed to understand what can be done to change course. As an example, in 2014, the AHWA’s research team fed back evidence from literature that addressing children’s healthy sleep habits was a key behavioural component missing from the programme, which needed to be changed to effectively tackle childhood obesity.

Communication – Being able to communicate effectively about the AHWA requires recognizable language, good evidence and instructive visualizations (Figure 2).

In all AHWA’s specific behaviour change interventions – be they some type of educational package, (social) environment change, or training for health promotion professionals – the aim is always to tailor them using evidence and evidence-

based methods to target populations in an effective manner. Therefore, some interventions will be tailored on basis of gender, and cultural habits, for example, while others will not. The AHWA often uses evidence-based methods, such as the Behaviour Change Wheel and intervention mapping, to help them design their efforts.

3.3 A platform for collaboration and participation

The need for a whole-system approach requires AHWA to facilitate and coordinate multisectoral, multi-stakeholder actions, which means that all communities, professionals, government and industries need to be involved.

The appointment of a senior programme manager to develop and lead the programme was a conscious choice to disrupt the habits of sectors to work in silos, while encouraging joint responsibility and ownership. The senior programme manager



FIGURE 2: Amsterdam as an obesogenic food paradise. This illustration is a good example of adequate communication on the complexity of the problem of childhood overweight and obesity and the need for a whole-system approach.

leads the daily management team that ensures all municipal policy clusters and city districts are covered and that all relevant existing policies, sector programmes and partnerships are connected. This team coordinates with focal points in various departments, such as public health, welfare, youth, education, spatial planning, public works, transportation, participation and employment. In total, a core group of about 25 people is involved in the coordination of the AHWA.

Starting from this integrated public management at municipal level, the programme built upon relevant existing and new partnerships, including those explicitly outside the municipality. This led to a broad engagement of all stakeholders, yet with clear focus and responsibilities. The inexhaustive table below illustrates the variety of actors who are involved in AHWA and the roles they play.

The AHWA invests in the active participation of its target groups (young people, their parents, professionals), since their views and behavioural drivers are invaluable to understand and integrate when designing effective, appropriate health promotion efforts of any kind (policies, educational interventions, peer support systems, environment changes). An example of this is AHWA's involvement in the Lifestyle Innovations based on youths' Knowledge and Experiences (LIKE) research consortium, which aims to engage in participatory action research with teenagers and to develop and test youth-led co-designed tools with them, instead of merely for them. AHWA is also a partner in the European Union-funded CO-CREATE project, which allows for fine-tuning actions focused on adolescents.¹⁸

3.4 Strengthening city governments' accountability

There is growing awareness that local environments and local governments have significant power to tackle factors causing childhood overweight and obesity.^{19 20} Therefore, it is relevant to highlight the growing importance of cities in terms of accountabilities and platforms for innovation as a key success factor, embedded in a continuous process of decentralization and new coordination mechanisms between local and national governments.

Every country has its own context and history regarding the existence of local government authorities and their accountabilities, but it is relevant to give a brief description of the governmental context of the Netherlands and the city of Amsterdam. Although municipalities have existed since the 1815 Constitution of the Netherlands, processes of decentralization and the adoption of new coordination mechanisms between the national, provincial and municipal level have continued to take place. For example, under the national Public Health Act of 2008, local governments were obliged to establish a local public health service in order to devise, implement and fund public health policies that were tailored to local issues and circumstances.²¹ Other functions in the social sector were also transferred, such as youth care and long-term care.^{22,23}

In general, municipal tasks have evolved slowly and now include urban development and land-use planning, social welfare, public health, social housing, public order and safety, local roads and public transport, primary and secondary education, local economic development, culture and recreation – all of which arguably have an influence on overweight and obesity prevention. The relatively recent emergence of local policy powers in this area explains why, until recently, municipal actions to address overweight and obesity were limited.

Prior to the establishment of the AHWA, there was no explicit attention to the wider determinants of overweight and obesity, such as poverty, (social) inequality, harmful (school) food environments, or the role of food companies in producing and marketing unhealthy foods. Analysing the growing numbers of children with overweight and obesity and analysing lagging results, the city of Amsterdam realized that the issue was too complex to be dealt with in sector silos. The city of Amsterdam, with its status as capital and its large population, became a hub for innovation and critical thinking on the level of urban management. The local situation inspired political leadership to translate a whole-system approach in a broad set of coordinated working areas in a horizontal (between municipal departments) and vertical (between administrative levels) manner.

ACTORS	ROLES
Responsible Alderperson	<ul style="list-style-type: none"> • Made childhood overweight and obesity a political priority • Instigated the AHWA
Mayor and College of Alderpersons	<ul style="list-style-type: none"> • Provided political commitment and funding • Required all city departments to contribute to addressing obesity
Department of Social Development	<ul style="list-style-type: none"> • Provided initial programme leadership to demonstrate that obesity is not just a public health issue
Pillar working groups	<ul style="list-style-type: none"> • Enable integrated day-to-day working across government departments and other city strategies
Public health service expert team	<ul style="list-style-type: none"> • Tracks programme outcomes
Academics	<ul style="list-style-type: none"> • Contributed to conceptual model for AHWA • Participate in expert team to provide new evidence- and practice-based insights
Sarphati Amsterdam	<ul style="list-style-type: none"> • Reviews efficacy and sustainability of childhood obesity measures
Central care managers (from youth public health team)	<ul style="list-style-type: none"> • Work with parents and caregivers of children affected by obesity to coordinate care and listen to individual needs
Schools/teachers	<ul style="list-style-type: none"> • Support AHWA objectives • Implement Jump-in Programme to promote healthy eating, drinking and exercise in schools
Parents and caregivers of obese children	<ul style="list-style-type: none"> • Reinforce policies outside of the school environment • Work with health care professionals to ensure individualized care for children with obesity • Empowered to improve families' lifestyles by professionals listening and responding to their needs
Community groups	<ul style="list-style-type: none"> • Participate in public meetings to provide local information to AHWA • Make decisions about their own healthy environment
Civil society organizations	<ul style="list-style-type: none"> • Non-governmental organizations such as Hartstichting, Samenwerkende Gezondheidsfondsen that are network partners of the city of Amsterdam. • Alignment on shared goals with the city of Amsterdam (for example, with respect to the lobby)
Health insurers and providers	<ul style="list-style-type: none"> • Commitment to the Healthy Weight Pact • Offer of various care pathways
Local businesses, food retailers and supermarkets	<ul style="list-style-type: none"> • Engagement in the Stop Unhealthy Food Marketing to Kids Alliance • Pilots to offer healthy food options in shops

TABLE 1: Key actors and their roles ³⁶

4.

PROGRESS TO DATE AND RECOMMENDATIONS FOR MOVING FORWARD

After the first years of the AHWA, it is worth summarizing some of the lessons learned in order to improve and inspire other cities and local governments. As childhood overweight and obesity are a growing concern globally, it is also relevant to define key success elements that might make the AHWA, or parts of it, transferable to other cities and contexts, particularly those in low- and middle-income countries.

Lessons learned by the city of Amsterdam, through the AHWA, are explained along four pathways, below, which offer suggestions as to how the city of

Amsterdam might improve its approach as it moves into the next phases. These lessons can also inspire other city and local governments that wish to start similar programmes, and bring national governments, private sector and other stakeholders together.

The described recommendations highlight that cities have a central role to play in the fulfilment of children's rights, but also in the local implementation of the 2030 Agenda for Sustainable Development, in particular Sustainable Development Goals 2 (**zero hunger**), 3 (**good health and well-being**) and 11 (**sustainable cities and communities**).



4.1 Apply a child rights lens to equitably reach all children and achieve sustainability

The AHWA focuses on children. An explicit commitment to children's rights provided new levers to the city of Amsterdam, its partners, and other cities and institutional bodies to achieve better results for all children, in particularly the most vulnerable. The list below highlights the most relevant articles of the Convention on the Rights of the Child that can help child nutrition and health programmes to be stronger and more sustainable, by explicit commitment to them. The assessment is sorted along six groups of articles, described below:

- the **right of all children**, without any discrimination (article 2)
- the responsibility of adults to ensure **children's best interest** and protect children's rights (article 3 and 4)
- the right **to survive and thrive**, with access to the best health systems and a clean environment (article 6 and article 24)
- the right **to participation** (article 12)
- the right **to protection** (article 17, 36)
- the right **to leisure, rest and play** (article 31)

The right of all children, without any discrimination

CRC Article 2: Non- discrimination



The Convention applies to all children, whatever their race, religion or abilities; whatever they think or say, whatever type of family they come from. It does not matter where children live, what language they speak, what their parents do, whether they are boys or girls, what their culture is, whether they have a disability or whether they are rich or poor. No child should be treated unfairly on any basis.

Access to nutritious, safe and affordable food must be provided based on the rights and needs of children and all other people, not on the basis of averages to measure success and return on investment.

Lessons learned

☀ AHWA is based on universality and equity. It is a city-wide initiative aiming to reduce the prevalence of child obesity among all children living in the city of Amsterdam, adopting a comprehensive life-course approach, with adapted interventions for each different age group. It also recognizes that specific efforts may be needed to reach children at greatest risk of overweight, obesity and an unhealthy lifestyle or are who are already affected by severe obesity.

Moving forward

⚡ By including a child rights-based framework in similar programmes and policies, local and national governments can address the challenges faced by vulnerable groups and ensure their access to nutritious, safe and affordable food and a healthy and safe environment. A child rights lens makes it explicit that marginalized and vulnerable children and their families, who disproportionately affected by malnutrition, are guaranteed an optimal level of nutrition and health. A commitment to child rights implies taking all needed steps to ensure that no child is discriminated against or stigmatized on the basis of their nutritional or economic status.

The responsibility of adults to ensure children’s best interest and protect children’s rights

CRC Article 3: Best interests of the child



The best interests of children must be the primary concern in making decisions that may affect them. All adults should do what is best for children. When adults make decisions, they should think about how their decisions will affect children. This applies particularly to those who develop budgets, policies and laws.

This means ensuring that commercial and other interests are not given priority over the best interests of the child and limiting the influence of commercial actors on policy development regarding nutrition and healthy food environments.

CRC Article 4: Protection of rights



Governments have a responsibility to take all available measures to make sure children’s rights are respected, protected and fulfilled.

This means that comprehensive national and local action plans are needed across all relevant government sectors and departments, including specific measures for the promotion of optimal diets for children.

Lessons learned

☀ With the initiation of AHWA, the city of Amsterdam upheld its responsibility regarding youth care, and recognized that the best interests of the child would be met with a whole-system approach, recognizing the importance of healthy diets, healthy behaviours and a healthy environment. By recalling that everyone is responsible, the approach made different sectoral departments prioritize children and take action. Through permanent learning, monitoring and adaptation cycles, AHWA supported the city to address harmful practices, such as unhealthy food marketing, and use its influential voice in policy discussions to advocate for children’s rights.

Moving forward

✚ Local authorities can embed children’s rights in a structured way throughout the public policy cycle related to food and nutrition, including by using mandatory child rights impact assessments, which are legislated nationally. Clarifying the accountabilities of all relevant government levels will help to develop comprehensive national and local action plans, effective regulations to protect children from unhealthy food environments, and appropriate coordination mechanisms for sectors and departments to address child rights concerns and to follow up with implementation, enforcement, monitoring and evaluation. The table below provides a brief overview of accountabilities at local and national level.

✚ Cities and other public institutions can also advocate for the private sector to commit to child rights, as elaborated in Children’s Rights and Business Principles,²⁴ which identify the actions that all business should take to respect and support children’s rights in the workplace, marketplace, community and environment, in conjunction with the government’s duty to protect human and children’s rights.

On the following page, a brief overview of accountabilities on local and national level.

TABLE 2: Accountabilities for child rights at local and national level

Topic	What city governments can do	What national governments need to do
General		
Good governance for children’s access to nutrition and health	<ul style="list-style-type: none"> • Develop innovative programmes within the local governance limitations; • Promulgate results and findings to other local governments, the national government and partners; • Develop opinions and advocacy shared by multiple local governments; • Recommend adaptation of governance limitations and better supra-local frameworks, including European Union regulations; • Establish and participate in healthy city networks. 	<ul style="list-style-type: none"> • Develop legislation, regulatory frameworks and incentive systems that facilitate local implementation, allow local contextualization and improve impact for all children, in particularly the most disadvantaged; • Conduct public nutrition and health risk assessments, supported by evidence; • Foster consultation with the European Union to facilitate better regulations that allow stronger promotion of healthy food and the restriction of unhealthy food and its marketing.
Commitment to child rights	<ul style="list-style-type: none"> • Promote the concept of a healthy city, healthy urban food environments, and other sustainable urban development policies as a commitment to children’s rights; • Include nutrition and health within the scope of responsibilities of city-level child rights focal points; • Pro-actively involve nutrition advisory committees, public health organizations, child rights and other civil society organizations. 	<ul style="list-style-type: none"> • Strengthen the role of the national child right body <i>Kinderrechtencollectief</i> to give advice on health and nutrition related children’s rights; • Establish mandatory child rights impact assessments in nutrition and health policies; • Pro-actively involve nutrition advisory committees, public health organizations, child rights and other civil society organizations.
Public sector responsibility		
Social protection	<ul style="list-style-type: none"> • Where appropriate, ensure that any food transfers, school feeding programmes, healthy food vouchers or cash transfers and other social protection measures are nutrition-sensitive to ensure children’s access to sustainable, healthy, nutritious and diverse diets. 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks that discourage subsidies of unhealthy foods.
School food and nutrition	<ul style="list-style-type: none"> • Develop local regulations, policies for public procurement and financial incentives that guarantee healthy and sustainable nutrition in local public institutions (city departments, municipal schools, youth and recreation organizations); • Support local school or community gardens and urban farming programmes, including through local regulations or policies; • Explore the feasibility of using ‘zoning’ or local planning laws to restrict the availability of unhealthy food in the vicinity of schools. 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks to expand public procurement and the provision of financial incentives to provide food in all school environments, such as in non-municipal or private schools; • Develop supportive national regulatory frameworks for school gardens to be included in school building regulations and financing; • Develop supportive national regulatory frameworks around the foods available in and around schools.
Free and safe water	<ul style="list-style-type: none"> • Provide free and safe drinking water in public schools and public spaces; • Develop local regulations that accommodate children’s access to free and safe drinking water in private spaces (shops, commercial centres, etc.). 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks to support public institutions and local governments to install free and safe drinking water and to ensure free access to drinking water in private spaces.

Physical activity	<ul style="list-style-type: none"> • Develop local regulation, planning, policy and financing to improve walkability, spaces for play and movement. 	<ul style="list-style-type: none"> • Develop supportive national frameworks to ensure physical activity in school curricula and financial incentives to promote movement.
Private sector engagement		
Conflict of interest	<ul style="list-style-type: none"> • Strengthen procedures to prevent and manage conflicts of interest; • Ensure transparency in local policy development processes regarding the involvement of food industry representatives. 	<ul style="list-style-type: none"> • Strengthen procedures to prevent and manage conflicts of interest; • Ensure transparency in national policy development processes regarding the involvement of food industry representatives.
Food and retail	<ul style="list-style-type: none"> • Implement location regulations and policies that promote the availability and affordability of healthy and sustainable food (e.g., sufficient food outlets selling fresh fruit and vegetables; preventing an overabundance of fast food outlets in areas); • Conduct research on the location and distribution of unhealthy and healthy (food) businesses; • Promote and foster alliances of healthy food businesses. 	<ul style="list-style-type: none"> • Establish food business and retail investment agreements, based on public nutrition and health risk assessments with attention to vulnerable groups such as children; • Explore which powers can be legally deployed by national and local governments to allow and facilitate the restriction in density of unhealthy food locations, particularly in areas where children are present (school areas, bus stops, etc.).
Food standards and labelling		<ul style="list-style-type: none"> • Develop food composition standards or food reformulation targets that support a healthy diet for children (e.g., reduce fats, salt and sugars) through regulation or co-regulation, for packaged foods as well as out-of-home foods and meals (street vendors, delivery); • Establish mandatory, evidence-based, consumer-friendly front-of-package food labelling (that is prominent and easily readable) for all packaged food products.
Health and nutrition related taxes	<ul style="list-style-type: none"> • Explore whether the city has legal jurisdiction to implement a local tax incentive to lower demand for unhealthy foods and ring-fence the funds for health promotion. 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks for tax incentives to lower demand for unhealthy food (e.g., via sugar taxes) and to encourage the supply of healthy foods.
Marketing	<ul style="list-style-type: none"> • Develop local regulation to restrict marketing of unhealthy food to children, including on transportation, at public transport stops/stations, in and around schools and other settings where children gather. 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks to restrict marketing of unhealthy food to children; • Foster consultation with the European Union to ensure the greatest possible protections and address cross-border marketing.
Sponsorship	<ul style="list-style-type: none"> • Develop local regulations to forbid sponsoring and promotion by unhealthy food brands for all sporting and leisure events for children (and other events that are likely to be attended by children), in public and private spaces in the city. 	<ul style="list-style-type: none"> • Develop supportive national regulatory frameworks to forbid sponsoring and promotion by unhealthy food brands for all sporting and leisure events for children (and other events that are likely to be attended by children), in public and private spaces.

The right to survive and thrive, with access to the best health systems and a clean environment

CRC Article 6: Survival and development



Children have the right to live and the chance to develop to their fullest potential. Governments should ensure that children survive and develop healthily.

Commitment to child rights goes beyond the provision of cure and care interventions, but also includes the promotion of preventive measures, including effective policies to increase the availability, accessibility and affordability of adequate nutritious food.

CRC Article 24: Health and health services



Children have the right to good quality health care but also need access to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy. Rich countries should help poorer countries achieve this.

Lessons learned

☀ The AHWA's whole-system approach aims to capture the entirety of relevant prevention, care and healthy environments to ensure optimal chances for a healthy upbringing for all Amsterdam's children. It complies with the 'Health In All Policies' framework, which integrates different cross-sectoral actions and embeds them in all relevant policies instead of only taking into account the domain of the health sector. The choice of activities in the clusters systematically reflect the goal to ensure access to healthy food, but also to ensure access to adequate care, to promote healthy behaviours and to shape a healthy food environment.

Moving forward

- ⊕ Cities could explore urban design investments in the targeted neighbourhoods that facilitate healthy behaviours and ensure a clean environment, with sport facilities, active transportation and urban agriculture.
- ⊕ City and national governments should strengthen their voice with the national government, European Union and other international normative organizations to develop better regulations that allow cities to adopt location policies based on health impact assessments. For example, restrictions on the availability and promotion of foods high in fats, salt and sugars where children gather beyond their schools, such as public transportation stops, cinemas, sport events and supermarkets.

The right to participation

CRC Article 12: Respect for the views of the child



When adults are making decisions that affect children, children have the right to say what they think should happen and have their opinions considered. Moreover, the Convention recognizes that the level of a child's participation in decisions must be appropriate to the child's level of maturity.

Children have the right to freely express their views in all matters affecting them and to be taken seriously, including the right to be heard in judicial and administrative proceedings.

Lessons learned

- ☼ The AHWA whole-system approach includes youth workers and educators as key professionals. They are trained and equipped with accurate information and tools to work appropriately with children of all ages on the prevention of childhood overweight and obesity, such as is the case through the Jump-in Programme developed in schools.
- ☼ There is ample evidence across all behavioural science literature showing increased effectiveness when involving the intended target population in such development and implementation processes. Therefore, AHWA also has invested in the direct participation of adolescents and teenagers in the development, evaluation and adaptation of the programme.

Moving forward

- ✚ Cities should systematically engage with adolescents and teenagers at a neighbourhood level by jointly mapping the neighbourhood in which they live and articulating their lived experiences there to share a common understanding of their challenges and co-design policy and practical solutions. By using co-design tools, such as CO-CREATE (discussed in section 3.3), or qualitative methods to develop child profiles, cities can engage children in order to design better policies and approaches.
- ✚ Cities should seek interaction with the participation channels for children that exist in many schools and local governments, such as child councils, youth councils or school boards. Cities should also join forces with child rights bodies (such as a child ombudsman) or human rights and civil society institutions that can support children's access to remedy.
- ✚ Cities should also use the opportunity to engage with semi-representative bodies of children and youth, including influencers and youth leaders, to discuss the urgency and complexity of childhood overweight and obesity and co-design solutions.

The right to protection

CRC Article 17: Access to accurate information; mass media



Children have the right to receive information that is important to their health and well-being. Governments should encourage mass media (print, radio, television, newspapers and internet content sources) to provide information that children can understand and to not promote materials that could harm children. Mass media in particular be encouraged to supply information in languages that minority and indigenous children can understand.

CRC Article 36: (Other forms of exploitation)



Children should be protected from any activity that takes advantage of them or could harm their welfare and development.

This means that children have the right to participate in a physical and digital environment that informs them about the positive and negative health impacts of the foods they eat, and prevents their personal data from being collected and exploited for commercial purposes. The digital literacy of children, families and caregivers should be strengthened to help them critically assess the food and nutrition-related content they are exposed to through online environments and other digital technology.

Lessons learned

- ☼ National overweight and obesity reduction initiatives invest in informative campaigns that highlight the negative health impacts of sugar-sweetened beverages and other unhealthy foods, while promoting healthy lifestyles. But it has been proven that these campaigns focus on individual responsibility, ignoring the power of marketing and the physical presence of unhealthy food in the neighbourhoods where the most vulnerable children live.
- ☼ Through the AHWA, the city of Amsterdam participates in the Stop Unhealthy Food Marketing to Kids Alliance. Partners in this national alliance recognize the negative influence of child marketing on childhood overweight and obesity. Through the Alliance, the city of Amsterdam aims to weigh in on national legislation and show leadership through the local implementation of marketing restrictions. For example, in 2020, the city adopted a regulatory framework for advertisements in public space based on recommendations from the Alliance.

Moving forward

- ⊕ City and national governments should join forces and call upon the media platforms and publishers to restrict content that may be harmful to children, including misleading marketing and other harmful content. They can also call for restrictions on the use of toys, giveaways or other incentives that entice children to consume unhealthy foods or are linked to the promotion of particular brands.
- ⊕ Through information campaigns at school, in the health care system and at public events, city governments can strengthen the digital media literacy and digital competencies of children, families and caregivers to help them critically assess the food

and nutrition-related content they are exposed to through online environments and other digital technology.

- ✚ Cities should explore and use all powers available to restrict the marketing of unhealthy foods within their jurisdiction. This may include the powers they hold over municipal public transportation systems, school systems, billboards, public institutions and sports facilities.

The right to leisure, rest and play

CRC Article 31: Children have the right to relax and play, and to join in a wide range of cultural, artistic and other recreational activities.

Leisure, play and culture



Children have the right to play, rest, leisure and recreation, without being exposed to unhealthy food and marketing.

Lessons learned

- ☼ The AHWA has developed several activities to foster healthy urban environments that facilitate physical activity, in coordination with existing programmes that promote physical activity and healthy behaviours, such as the Active City Programme (soon to be integrated in the upcoming Amsterdam Healthy City Programme) and the Jump In Programme for primary schools.
- ☼ Particularly interesting is the investment in promoting enough sleep among children, which relates to an area of well-being usually not associated with childhood overweight and obesity programmes. This requires access to less stressful environments and parents to have a good work-life balance so to be able to invest in family life, with time to talk, play and read before bedtime.

Moving forward

- ✚ Cities should strengthen childhood overweight and obesity reduction programmes by establishing foodscape surveys with children, which analyse the positive value children give to specific obesogenic spaces, such as fast food restaurants. Such surveys help identify the hurdles to physical activity and access to healthy food, particularly in target neighbourhoods, which often lack healthy food options, safe public spaces for play, and affordable sport facilities. These surveys could be combined with opportunity maps to locate potential places where access to affordable and healthy food could be possible, such as farmers markets, community gardens, and social restaurants.

4.2 Invest in innovative city-level programming

In many countries, local governments are only recently gaining full responsibilities. Even in the Netherlands, where local governments have existed for a long time, their accountabilities are still evolving in processes of decentralization. In parallel, cities have not only gained powers, but also proven to be test-beds for innovative approaches.

The AHWA showcases what local governments can potentially do, by strengthening urban policy, management, governance and evidence. AHWA also shows that it is important to work both at national and local level, building on principles of subsidiarity and strengthening the accountability of public institutions towards private stakeholders.

Support innovation in urban policy, strategy and management

Lessons learned

- ☀ From its initial phase, the city consciously chose an integrated approach to build on and expand through existing programmes, instead of developing an entirely new, siloed programme focusing only on childhood overweight and obesity as a health issue. The interdepartmental approach, piloted in the Department of Social Affairs in the initial phase – rather than the Health Department – facilitated the mapping of bottlenecks and solution chains among existing programmes, partnerships and stakeholders outside the public health sector.
- ☀ Awareness has grown that prevention of overweight and obesity requires a healthy environment and healthy behaviours. Therefore, AHWA consciously adopted a whole-system approach in which everyone has a responsibility. Consequently, the city of Amsterdam has recently launched a broader vision to develop a healthy city. AHWA can thereby grow as a facilitator that actively advocates for the translation of the Health in All Policies model on a city-wide scale.
- ☀ The option of an integrated approach implies the need to set up a co-financing mechanism among the various departments that focuses on shared responsibilities and ownership, investing in human resources, time and shared understanding. Once the whole-system approach had been set up, AHWA looked for project-bound resources.
- ☀ Political leadership is key to address complex problems that are difficult to tackle and not fully acknowledged. In the case of Amsterdam, the deputy mayor played a fundamental role in understanding the seriousness of childhood overweight and obesity as a health crisis, but also in recognizing the complexity of a problem that requires a whole-system approach. The fact that he was responsible for both Health and Social Welfare has facilitated a multi-sector approach as new way of working within the city administration.

Moving forward

- ✚ It is important for cities to train and invest in skilled project managers that can innovate, coordinate and motivate a broad core team across various departments. A manager needs to dare to think in a disruptive way in an initial phase, focus on evidence-based and shared pathways towards solutions, on reachable targets and clear communication and support for all stakeholders. Impact and sustainable change also rely on clear roles and responsibilities of focal points and external partners in a multi-matrix management. Different goals need different types of management approaches, so process management, project management and programme management tasks need to be carefully considered.

- ✚ There is growing awareness that a healthy food agenda needs to be developed within planetary boundaries. As indicated in the EAT-Lancet report, providing healthy diets to a growing population on earth will only be possible if we change eating habits, improve food production and reduce food waste.²⁵ Also there are concerns that more dependency of national and global markets beyond the city boundaries will increase risks of sudden lack of availability of affordability of healthy food. AHWA is well placed to strengthen the city's efforts to become both a healthy city and a circular city, relating to the recent ambitions of the city to become a 100 per cent circular city in 2050.²⁶

Invest in local governance mechanisms that strengthen principles of subsidiarity

Lessons learned

- ☀ The Netherlands and other European countries have strongly decentralized policies. Local governments have mature political and administrative capacities, with strong data, planning, budgeting, taxation and financing mechanisms. As Amsterdam showcases, important accountabilities have been delegated mainly or completely to the local level, such as management of neighbourhood care systems, transportation and waste management.
- ☀ Local governments with their own accountabilities and mature policy and administrative frameworks are able to develop innovative programmes. In Amsterdam, the city government has integrated urban policies in a horizontal way (inter-departmental), but also taken measures that align and complement national legislation in a vertical way. For example, with the Stop Unhealthy Food Marketing to Kids Alliance, the city of Amsterdam installed stronger regulation on sponsoring and food marketing.
- ☀ The National Prevention Agreement²⁷ highlights the importance of prevention measures to reduce obesity. The government is also exploring measures such as restrictions on food marketing to children and a national tax on sugar.²⁸ The learning approach in the AHWA (discussed in section 2.3, VI) helps to gather scientific evidence on why and how additional national legislation is needed.

Moving forward

- ✚ Other governments that want to reduce childhood overweight and obesity should include a local governance lens in the situation analysis (to understand specific challenges related to children's food environments in an urbanizing world), and in the programme design phases (to optimally use the capacities of local government and local actors for effective implementation, monitoring and evaluation).
- ✚ In order to make efforts to reduce childhood overweight and obesity more effective, legislative work is needed by national governments to close gaps in regulations.
- ✚ Capital and large cities such as Amsterdam often have the capacity to take the lead in innovation. Yet, they also face challenges because their internal organization tends to be more layered and siloed. Cities of all sizes need to be supported to undertake similar approaches, in order to scale up results. Therefore, national governments should develop national programmes for city and local governments, with for example, national associations of local governments, so that Amsterdam and other cities can share and learn from each other.

Design evidence-based programme activities that can be monitored and evaluated

Lessons learned

- ☼ To address a complex problem, it is important to invest in results-based management, with clear mechanisms of evaluation and adaptation. The AHWA programme was launched after comparing national and city level data on child overweight and obesity. While the AHWA is a 20-year 'marathon', it also has clear five-year interim targets related to cluster activities that have been monitored.
- ☼ The AHWA used data on child BMI prevalence to address the issue of child overweight and obesity at a political level and gain political commitment by conveying the urgency of the situation. Other indicators of health and fitness are complementary to BMI and can be used as indicators of progress; however, these data are not routinely collected.
- ☼ Similar challenges arose when determining the effects of socio-economic status, because such indicators are determined at a neighbourhood level rather than an individual level. The innovative Sarphati Institute addressed this by systematically mapping and following the development of children and the characteristics of their environment at an individual level.

Moving forward

- ✚ With an integrated approach such as AHWA, cities should consider the multiple indicators of impact beyond BMI. They should target the many evidence-based factors that lead to healthier weight development in children, such as creating a healthier food environment or stimulating healthy sleep patterns in children. Such factors can then be measured as proximal indicators for healthy weight development, regardless of whether BMI is realistic to measure reliably at large scale. Also, since multiple factors contribute to BMI development, it makes sense to validly measure those factors to evaluate whether the approach is doing the right things in the right way.

Use an area-based approach to increase impact for the most vulnerable children

Lessons learned

- ☼ Supported by neighbourhood level data, an existing network of community managers and a care network, the city decided to focus implementation on neighbourhoods where most children with obesity and socially vulnerable children live, starting with 5 neighbourhoods initially, then increasing to 11. The limited geographical focus allowed for a better knowledge of the target population in such areas. This granular level of the neighbourhood makes it easier to undertake meaningful and trusting dialogue through neighbourhood managers that are well-acquainted with local cultures, customs, history and current issues.
- ☼ AHWA includes cluster activities related to the built environment, because opportunities for physical activity and healthy food establishments can be planned as part of the physical environment to encourage healthy behaviours and diets.
- ☼ Principles of physical activity and healthy food environments have been integrated in the Active City programme, mostly guiding new urban developments in Amsterdam. But there is little knowledge on how the physical environment of existing neighbourhoods influences the diets and behaviours of the most vulnerable children and their families in daily life. To address this gap, the city of Amsterdam recently started a 'Families and Food' study based on recent research done by the Guy's and St Thomas' Charity

in London.²⁹ This study is following families in their daily life to better understand how their living environment should be adapted to include more space for physical activity and direct access to healthy food shops or areas for community gardening.

Moving forward

- ✚ Cities should use quantitative and qualitative data to set up area-based programmes. This means combining geographically referenced data on all forms of deprivation (childhood overweight and obesity, poverty, poor built environments) with more anthropological studies that involve the local population and use local intelligence to design interventions. This allows for targeting at a more granular level, developing comprehensive cluster activities and ensuring proper and appropriated implementation to increase effectiveness.



FIGURE 3: Implementation areas for the Amsterdam Healthy Weight Approach in 2016

4.3 Enhance partnership models for allocation of resources

The AHWA showcases the importance of engaging with various stakeholders in order to define collaboration and financing mechanisms. It underlines the accountability of non-governmental professional stakeholders.

Invest in stakeholder engagement and support

Lessons learned

- ☀ Existing health and care networks (family assistance, early childhood development, child health) are key entry points for embedding the programme in a broad life cycle approach.
- ☀ Schools and daycare centres are key platforms for collecting data on child overweight and obesity and implementing activities in synergy with existing programmes (healthy lunch program, physical activity). Within the Jump-in Programme, they also provide nutritious snacks and lunch.
- ☀ Community managers allow outreach to a wide and detailed network of stakeholders at neighbourhood scale. They developed innovative approaches to train 400 women (mothers and other key female figures within the communities) as health ambassadors and to involve imams and vicars to optimally reach citizens from a range of cultures and backgrounds.
- ☀ AHWA facilitated local food businesses and a large supermarket chain to experiment on food choices and lay-outs that promote healthy and sustainable nutrition, encouraging them to avoid placing unhealthy food within reach and sight of young children.

Moving forward

- ⊕ Cities could engage more with small producers and mobile food vendors that are active in farmers markets, but also at events (food trucks, stalls, walking vendors), to encourage and support them in serving more healthy and sustainable foods.
- ⊕ Cities should also foster engagement with local retailers and shop owners, for example by providing technical assistance with design guidelines to promote healthy and sustainable food first (lay-out, outdoor stalls and in-store marketing practices).

Build sustainability of the programme through the health, food and social protection systems

Lessons learned

- ☀ In the Netherlands there is universal access to health care: the Government ensures the financing of primary care for all. It also regulates non-profit health providers and insurers, imposing universal coverage regardless of age or state of health, and defining what is included in basic care.

Moving forward

- ⊕ Cities and national governments should develop a universal health coverage system, with an important role for local authorities to coordinate providers and insurers in their offer of basic care services for all, including services to prevent and manage childhood overweight and obesity.
- ⊕ To ensure the sustainability of childhood overweight and obesity prevention programmes, food systems actions are also needed through national legislation around marketing and sponsoring by food and beverage companies as well as a sugar tax.

- ✚ Cities should also increase attention to the affordability of healthy food, highlighting the high cost of living and the little margins available for food among poor families. To improve access to healthy food and caregiver practices, it is important to assess the effectiveness of nutrition-sensitive social protection and support mechanisms for the poorest families, such as cash transfers, nutrition counselling and/or healthy food schemes.

Leverage sustainable financial resources

Lessons learned

- ☼ The city has consciously built the programme without a specific budget allocation in the initial phase to emphasize that a healthy weight should not depend on specific public investments, but rather, should be the outcome of existing, well-performing activities and their policies. In the second phase, a specific budget has been allocated, which only represents 0,04 per cent of the total municipal budget. This shows that the 20-year objective can be pursued in a sustainable way, with modest resources on an annual base.

Moving forward

- ✚ It is not clear to what extent public or private partnerships and revenues have been activated to specifically leverage financial resources in a sustainable way. The city and the national government could explore how a future tax on sugar or other levies on private markets can be invested in public programmes that focus on reducing childhood overweight and obesity.

4.4 Support professionals and priority groups to co-design solutions

The AHWA showcases the importance of engaging with various stakeholders in order to define collaboration and financing mechanisms. It underlines the accountability of non-governmental professional stakeholders.

A programme for and with children

Lessons learned

- ☼ The programme focuses on four priority age groups and has developed specific support systems and communication with these groups within the course of a lifecycle, through professional networks (health care, early child development centres, schools, etc.). Yet, some groups are difficult to reach, such as adolescents and children living in deprived communities.

Moving forward

- ✚ Cities should include children from the start through effective participation, listening to their challenges and needs, and supporting them in gaining confidence to co-design solutions.
- ✚ To engage with children that are difficult to reach, such as adolescents and youth, cities should use innovative ways of communication and co-design with influencers and youth leaders.
- ✚ Cities should use their advantage of proximity to communities as an opportunity to establish and disseminate official participation mechanisms for children, ensuring they are aware of their right to be heard and to influence processes that affect them. This includes respecting children's right to participate in digital media.

See also paragraph 4.1 on CRC 12: Respect for the views of the child

**Build capacity
of urban
management
professionals
and local
authorities**

Lessons learned

- ☼ AHWA has invested in clustered activities around learning to capacitate all professionals needed in the whole-system approach. This learning builds upon existing protocols, policies and programmes.
- ☼ The programme has been supported by political leadership that acknowledges the importance of developing a cross-departmental collaboration with agile project managers.
- ☼ AHWA has invested in communication and the dissemination of information materials adapted to various age groups and professionals.

Moving forward

- ⊕ It is important to develop platforms for fostering political leadership and project management. There is little scientific literature from the field of political science and change management on dealing with public health topics. As food and beverage companies can rely on detailed in-house knowledge and invest in influencing consumers and public authorities, they might profit from the absence of a strong public focus, both at the policy and academic level.
- ⊕ Other cities need to be supported with science-based tools and need guidance on how to develop a research agenda with local and global academic partners. Existing and new city networks (such as Cities Changing Diabetes and C40) can accommodate knowledge sharing and technical assistance to reduce childhood overweight and obesity within broader efforts to develop healthy cities within planetary boundaries.^{30,31}
- ⊕ The city planning department needs more guidance on how to support the built environment component of programmes that aim to encourage healthy weight and a healthy city. Technical staff members need guidance, training and tools to properly assess food environments, support in foodscape studies with young people, and use their toolbox of planning regulation.

ANNEX 1: BASELINE DATA

The city of Amsterdam has access to data on the height and weight of every child at various ages through periodic health checks by the youth health care and the public health service (collected via surveys, self-reporting, consulting moments). BMI has been used to define the prevalence of overweight and obesity, taking into account differentiated caps between health and overweight according to age. There are mainly two types of collected data that are geo-referenced to allow for disaggregation by city area, neighbourhood and district.

Data on individual weight

- Data on prevalence of underweight, overweight and obesity, by age groups (ages 2–3; 5–10; and 14–16 years)
- Data on prevalence of underweight, overweight and obesity, by origin and age groups (ages 2–3; 5–10; and 14–16 years)
- Data on prevalence of underweight, overweight and obesity, by social economic status (in quintiles), by sex, and by level of education of the parents

Data on healthy behaviours

- Infant feeding, by age
- Survey data on healthy food and drinks, by age (5–10 and 14–16 years), by sex and educational level
- Survey data on physical activity, by age (5–10 and 14–16 years), by sex and educational level

ANNEX 2: ILLUSTRATION OF ACTIVITIES AND MONITORING RESULTS

While the national average has remained the same, overweight and obesity prevalence in Amsterdam among children in all age groups appeared to decline by 12 per cent between 2012 and 2015, from 21 per cent to 18.5 per cent. Yet, this trend seems to be levelling from 2015 until now.

As stated previously, BMI is a measure that is dependent on multiple factors, and therefore these developments cannot be causally linked to the actions of AHWA alone. The positive contribution of the AHWA is however expected, as explained in this report. In order to tackle obesity even more effectively, national government intervention is needed. For example, government can enact strict regulations on the food industry regarding maximum amounts of sugar, fat and salt and minimum amounts of fibre in food products; adopt tax measures to make fruit and vegetables more affordable; or restrict the marketing of unhealthy food for children. Governments can also foster a healthier environment at a local level by banning fast food and supermarkets around schools and developing a business model together with entrepreneurs to sell healthier products.

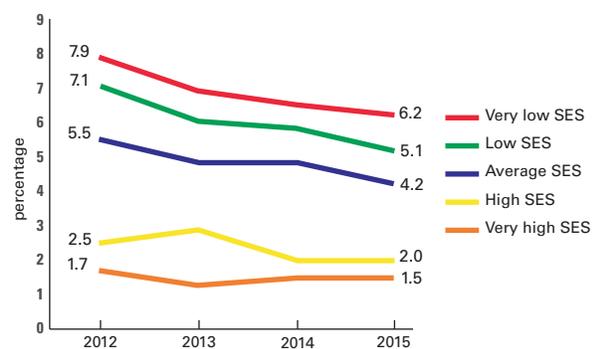


FIGURE 4: Trend in the prevalence of obesity by socio-economic status (SES) for 5–10-year-olds in Amsterdam (2012–2015)

Source: Amsterdam Healthy Weight Programme: Outcome Monitor 2017

As previously explained in section 2, many interconnected factors make up the obesity-influencing system. Therefore, these promising results cannot be simply explained as the exclusive legacy of AHWA. Yet, as AHWA deals with non-linear relationships and feedback loops between factors in the system, the approach contributes to effectively translating targets in activities and monitoring, evaluating and adapting them in a systematic way. The impact of the programme, its intervention clusters and activities, are monitored on a quarterly basis and produce output reports for evaluation and review.

The section below presents the targets and activities in various phases of the programme. Every city will define and adapt activities based on context and target groups.

Target 2018 – The 5000-metre race

The first phase of the marathon defined the following objective: children between the ages of 0 and 5 years in Amsterdam have a healthy weight. The focus on the youngest children would allow for concentrating on those children that are born during the programme and would symbolize the needed endurance. The objective was broken down into two targets:

- Target: More children have a healthy weight
- Sub-target: Children between the ages of 0 and 5 years in Amsterdam have a healthier weight than in 2013
- Target: Fewer children with overweight or obesity
- Sub-target: Children between the ages of 0 and 5 years are no more than 5 percentage points above the national average

Although most targets and sub-targets have been achieved, there are no explicit evaluations linking the programme and its activities with these positive changes.³²

The multi-annual programmes for 2013–2014 and 2015–2018 had put forward several output sub-targets, where output relates to the programme cluster (see section 1.3). Most of them have been achieved.³³

- Amsterdam must demonstrably become a more healthily organized city through urban design.
- There must be a significant reduction in the number of children with overweight and obesity in the five neighbourhoods where the programme started.
- The neighbourhood approach must be extended to cover five other targeted neighbourhoods.
- There must be fewer primary schools with more than 25 per cent of pupils with overweight or obesity.
- All children with obesity or severe obesity must be given appropriate care.
- There must be no attrition in the chain: the right type of care at the right time.
- There must be a demand-driven service package, with scope for responsibility and empowerment of the people themselves.
- The BMI of 5-year-olds in Amsterdam must not deviate negatively from the national average by more than 5 per cent.
- The number of children classified as having a healthy weight must be greater than in 2013.

Through these programme clusters and the synergy with existing programmes, there is a broad set of activities that took place in the 2015–2018 phase. These activities should not be seen as a checklist to follow for success in other contexts; rather, they illustrate what the AHWA thought to be relevant, achievable and efficient at that specific moment in the programme.³⁴ These include:

- A ban on the marketing of unhealthy food products to children at sporting events;

- 500+ trained health care/youth professionals;
- 200 trained health ambassadors;
- A collaborative network with midwives, maternity care, youth health care and parent and child teams implemented in 11 neighbourhoods;
- 25,000 school children in the Jump-in Programme;
- 120 of 220 primary schools participating in the programme and healthy primary schools becoming the norm;
- Pilots with healthy businesses are still being developed, with 12 currently including supermarket chain Albert Heijn and local snack bars;
- 1,200 preschool parents involved in programme activities;
- 8 community 'health' markets offering healthy advice, healthy snacks and other support;
- 1,734 healthy eating consultations;
- 2 out of 3 children with severe obesity (1,200) are receiving support;
- 11 out of 22 neighbourhoods are involved in the programme.

Target 2023 – The half marathon mission

The second phase of the marathon defined the following objective: children between the ages of 0 and 10 years in Amsterdam have a healthy weight.

To achieve these results, ongoing activities and programme clusters were analysed and evaluated, leading to an adapted set of activities. The activities align with other existing or new programmes, such as Active City design principles for all new development and redevelopment areas steered by the urban planning department. Similarly, the programme fostered engagement from businesses to be active in the Healthy Amsterdam Business Network. Examples of activities include:³⁵

- Three interventions are developed for a healthier transition from ages 10 to 14 years;

- All schools and nurseries in Amsterdam meet the AHWA guidelines and standards;
- All schools where BMI is above the national average are offered support or participate in the Jump-in Programme;
- In neighbourhoods where the programme operates, at least 20 per cent of the target group is reached through neighbourhood interventions;
- All new developments are designed in accordance with the healthy city principles (The Active City);
- Increase the number of start-ups/businesses involved in the Healthy Amsterdam Business Network from 12 to 48;
- Amsterdam learns from, and develops with, at least four other major cities involved in whole-system approach to tackling inequalities and shares learning;
- An agreement is established with Amsterdam-based higher education establishments for a course in tackling health inequalities in Amsterdam;
- There are fewer children with overweight, obesity or severe obesity; and children with severe obesity are identified and treated;
- There are fewer 2–3-year-old children with overweight or obesity;
- More parents of children aged 0–2 years who are at increased risk of overweight are given support in adopting a healthy lifestyle;
- Children with overweight or obesity have access to adequate, appropriate and high-quality services;
- The city of Amsterdam is among the top five healthiest cities in Europe by 2033, and the average BMI in Amsterdam is the same as the national level, or lower.

BIBLIOGRAPHY

Reports and websites from the city of Amsterdam

- Amsterdam Healthy Weight Programme: Summary of programme plan, reviews and fact sheets.
- Available at: www.amsterdam.nl/sociaaldomein/blijven-wij-gezond/amsterdam-healthy/
- Amsterdam Healthy Weight Programme: Review 2012-2017 Part 2. Available at:
- www.amsterdam.nl/bestuur-organisatie/organisatie/sociaal/onderwijs-jeugd-zorg/zo-blijven-wij/amsterdam-healthy
- Staat van gezond gewicht en leefstijl van Amsterdamse kinderen, Outcome monitor Amsterdamse Aanpak Gezond Gewicht, 2017

Existing case studies on the Amsterdam Healthy Weight Approach

- Centre for Social Justice, *Off the Scales, Tackling England's childhood obesity crisis*, 2017.
- Hawkes, C., and Halliday, J., *What makes urban food policy happen? Insights from five case studies*. International Panel of Experts on Sustainable Food Systems (IPES-Food), 2017.
- *What can be learned from the Amsterdam Healthy Weight program to inform the policy response to obesity in England?*, Obesity Policy Research Unit (OPRU), 2017.
- Development Initiatives, *2018 Global Nutrition Report: Shining a light to spur action on nutrition*, Bristol, UK: Development Initiatives, 2018.
- Amsterdamse Aanpak Gezond Gewicht (*Amsterdam Healthy Weight Approach*): likely to succeed?, Nederlands Jeugdinstituut, VU University Amsterdam and Cuprifère Consult.

- *Amsterdam Healthy Weight Program case study*, in Health Equity Pilot Project, European Union, 2018.
- Halliday, J., Platenkamp, L., Nicolarea, Y., *A menu of actions to shape urban food environments for improved nutrition*, Global Alliance for Improved Nutrition, Milano Urban Food Policy Pact and Resource Centres on Urban Agriculture and Food Security, 2019.
- British-Irish Parliamentary Assembly, *Report from Committee D on Childhood Obesity*, 2017.
- *Final report of the Select Committee into the Obesity Epidemic in Australia*, 2018.

Other reports

- The Lancet Commission, *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*, 2019.
- United Nations Children's Fund, *The State of the World's Children 2019. Children, Food and Nutrition: Growing well in a changing world*. UNICEF, New York, 2019.
- United Nations Children's Fund, *Shaping Urbanization for Children: A handbook on child-responsive urban planning*, UNICEF, New York, 2018.

ENDNOTES

- 1 Systems science focusing on public health conceptualizes poor health and health inequalities as outcomes of a multitude of interdependent elements within a connected whole. A complex systems approach uses a broad spectrum of methods to design, implement, and evaluate interventions for changing these systems to improve public health.
- 2 More information in English on the Amsterdam Healthy Weight Approach (in Dutch, Amsterdamse Aanpak Gezond Gewicht, known by its acronym – AAGG) is available at www.amsterdam.nl/sociaaldomein/blijven-wij-gezond/amsterdam-healthy/
- 3 Amsterdam Healthy Weight Program: Review 2012–2017 Part 2. Available at: www.amsterdam.nl/bestuur-organisatie/organisatie/sociaal/onderwijs-jeugd-zorg/zo-blijven-wij/amsterdam-healthy
- 4 The national programme Kansrijke Start was launched in 2018 by the Ministry of Health, Well-being and Sport. More information available at: <https://www.kansrijkestart.nl/>
- 5 Various research activities have analysed elements of the school-based programmes to improve further design and gather scientific evidence in the domain of behavioural science related to children. Some relevant scientific reviews: on the evaluation of the school-based Jump-In intervention on sports participation and physical activity: <https://research.vu.nl/en/publications/jump-in-development-and-evaluation-of-an-intervention-to-promote-;> on the evaluation of the School-Based Jump-In Intervention on Dietary Habits: <https://www.mdpi.com/1660-4601/17/4/1145>; on the effectiveness of the PLAYground programme: <https://bjsm.bmj.com/content/49/4/259>; on the effectiveness of school gardening programmes to children's preference for vegetables: <https://onlinelibrary.wiley.com/doi/full/10.1002/fsn3.758>
- 6 Nury E., et al. 'Sowing Seeds for Healthier Diets: Children's Perspectives on School Gardening', *Int J Environ Res Public Health*, vol. 14, no.7, June 2017, pp.688, doi:10.3390/ijerph14070688.
- 7 The position paper and more information on the Stop Unhealthy Food Marketing to Kids Alliance are available at www.stopkindermarketing.nl/
- 8 A detailed description of the pilot with a large supermarket chain Albert Heijn has been documented in Halliday, J., Platenkamp, L., Nicolarea, Y., A menu of actions to shape urban food environments for improved nutrition, GAIN, MUFPP and RUAF, 2019, p. 52-53
- 9 The Active City programme (in Dutch: De Bewegende Stad) aims to design the city to increase the movement of its citizens. It elaborates a movement logical framework in building blocks, an atlas, guides and examples. Available at: <https://www.amsterdam.nl/bestuur-organisatie/volg-beleid/bewegende-stad/>. The Active City programme will be integrated soon in the new Amsterdam Healthy City programme.
- 10 The on-line Atlas of Movement is a geo-spatial data dashboard on movement patterns in Amsterdam. Available at <https://amsterdam.maps.arcgis.com/apps/MapSeries/index.html?appid=7600b9daf0aa4739b2e5e195beee5975>
- 11 The Healthy Weight Pact is an initiative of the Amsterdam Healthy Weight Approach, the health insurer Zilveren Kruis Achmea and more than 20 umbrella organizations working on welfare, care, civil society and sports.
- 12 In 2013, the Government of the Netherlands initiated a national stimulation programme to reduce health inequalities at local level. This programme entailed a budget of approximately €80 million for the period 2013–2018 and was extended until 2021. From this budget, Amsterdam receives a yearly contribution of €2,3 million until 2021. More information is available at www.gezondin.nu/kennisbank/decentralisatie-uitkering-gezond-in-de-stad-gids/
- 13 World Health Organization, The Helsinki Statement on Health in All Policies, 2014.
- 14 The Health in all Policies Framework for Action has been developed by the World Health Organization, and is available at: <https://www.who.int/healthpromotion/frameworkforcountryaction/en/>
- 15 McGlashan J., et al, 'Comparing complex perspectives on obesity drivers: action-driven communities and evidence-oriented experts', *Obes Sci Pract*, vol. 4, no. 6, October 2018, pps. 575–581.
- 16 Michie, S., van Stralen, M.M. and West, R., 'The behaviour change wheel: A new method for characterising and designing behaviour change interventions', *Implementation Sci*, vol. 6, no. 42, 2011, <<https://doi.org/10.1186/1748-5908-6-42>>
- 17 McGlashan J., et al, 'Comparing complex perspectives on obesity drivers: action-driven communities and

- evidence-oriented experts', *Obes Sci Pract*, vol. 4, no. 6, October 2018, pps. 575–581.
- 18 AHWa is part of the 'Lifestyle Innovations based on youths' Knowledge and Experiences' (LIKE) research consortium. More information is available at: <http://like-onderzoek.nl/>. AHWa also participates in the European Union-funded CO-CREATE project. More information is available at: <https://eatforum.org/initiatives/co-create/>
 - 19 Swinburn B., Egger G., Raza F., 'Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity', *Prev Med*. vol. 29, no. 6 Pt 1, 1999, pps. 563–570.
 - 20 Meadows D., *Thinking in Systems: A Primer*. Sterling, Earthscan, VA, 2009.
 - 21 Maarse H., et al. 'The Netherlands', in Rechel B, et al., editors. *Organization and financing of public health services in Europe: Country reports* [Internet]. Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2018. (Health Policy Series, No. 49.) 7. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK507329/>
 - 22 *Healthcare in the Netherlands*, Ministry of Health, Welfare and Sport, The Hague, 2018
 - 23 Centre for Social Justice, *Off the Scales, Tackling England's childhood obesity crisis*, December 2017
 - 24 Recognizing a need for explicit guidance on what it means for business to respect and support children's rights, the United Nations Global Compact, Save the Children and UNICEF worked together to develop a set of principles. The Principles define what business can do to support children's rights as part of their corporate social responsibility. More information available at: https://www.unicef.org/corporate_partners/index_25078.html
 - 25 The Lancet Commission, *Food in The Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*, 2019. Available on-line: <https://www.thelancet.com/commissions/EAT>
 - 26 The city of Amsterdam has adopted the ambition towards a circular city in 2050, and drafted a strategy 2020–2025. The definition and strategy towards a Circular City is inspired by the Doughnut model. More information available at: <https://www.amsterdam.nl/bestuur-organisatie/volg-beleid/coalitieakkoord-uitvoeringsagenda/gezonde-duurzame-stad/amsterdam-circulair-2020-2025/>
 - 27 The National Prevention Agreement is the national policy plan on health prevention. It is available at <https://www.rijksoverheid.nl/documenten/convenanten/2018/11/23/nationaal-preventieakkoord>
 - 28 The Minister for Public Health, Well-being and Sports has provided in June 2020 a progress report on the National Prevention Agreement to the Parliament. It is available at: https://www.tweedekamer.nl/kamerstukken/brieven_regering/detail?id=2020Z11833&did=2020D25402
 - 29 More information on the research in London is available at: <https://www.gsttcharity.org.uk/get-involved/news-and-opinion/views/families-and-food-how-can-we-help-families-swim-against-current>
 - 30 *Cities Changing Diabetes* is a partnership program launched by the Steno Diabetes Center Copenhagen, University College London and Novo Nordisk, to address the factors that increase type 2 diabetes vulnerability among certain people living in urban environments. More information is available at: www.citieschangingdiabetes.com.
 - 31 C40 is a network of the world's megacities committed to addressing climate change. More information is available at: www.c40.org.
 - 32 *Development Initiatives, 2018 Global Nutrition Report: Shining a light to spur action on nutrition*, Development Initiatives, United Kingdom, pp.50.
 - 33 *Amsterdam Healthy Weight Program: Review 2012–2017 Part 2*. Available at: www.amsterdam.nl/bestuur-organisatie/organisatie/sociaal/onderwijs-jeugd-zorg/zo-blijven-wij/amsterdam-healthy
 - 34 List from Amsterdam Healthy Program case study, in *Health Equity Pilot Project*, European Union, February 2018, pp.13
 - 35 List from Amsterdam Healthy Weight Program case study, in *Health Equity Pilot Project*, European Union, February 2018, pp.19
 - 36 The table is inspired by the table used in: Hawkes, C., and Halliday, J., *What makes urban food policy happen? Insights from five case studies*, International Panel of Experts on Sustainable Food Systems (IPES-Food), 2017, pp. 51.
 - 37 The table is inspired by the table used in the case-study, Hawkes, C, and Halliday, J, *What makes urban food policy happen? Insights from five case studies*. International Panel of Experts on Sustainable Food Systems (IPES-Food), 2017, p. 51

